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Proceedings of the Topical Meeting on

LASER MATERIALS and LASER SPECTROSCOPY

(A SATELLITE MEETING OF IQEC '88)

Shanghai, China
July 25–27, 1988

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PREFACE

The Proceedings contain the majority of the papers presented at the Topical Meeting on Laser Materials and Laser Spectroscopy which was held at the Tien-Ma Hotel in Shanghai, China on July 25-27, 1988. This topical meeting is a post-conference meeting for the 16th International Quantum Electronics Conference in Tokyo, Japan and it focused on the relatively narrow subjects of laser materials and laser spectroscopy. The Chinese optics and laser community has greatly progressed in these fields in the past years, and hope to have opportunities to share their results with the outside world as well as to learn from the international optics and laser community.

The Topical Meeting was sponsored by the Chinese Optical Society and co-operatively supported by the Chinese Physical Society, Joint Council of Quantum Electronics, Laser and Electro-Optics Society of IEEE, Optical Society of America and SPIE. The organizations in Shanghai district: Fudan University, Shanghai Institute of Laser Technology, Shanghai Institute of Optics and Fine Mechanics, Shanghai Laser Society, were in charge of the detailed preparation for the successful meeting.

The Organizing Committee is much obliged for the kind financial support from ICTP, National Science Foundation of China, National Scientific and Technological Committee of China, North China Research Institute of Electro-Optics, and Shanghai Jiaotong University.

The purpose of this topical meeting is to review the state-of-the-art research achievements in the fields of laser materials and laser spectroscopy and to create an academic and harmonic environment of understanding and interaction between the international scientists in China. More than twenty leading scientists presented their recent achievements in these two fields and over hundreds of papers were presented, including the work by young graduate students. The high quality of their presented researches is reflected in the Proceedings which fulfilled the success of this meeting.

All the papers selected for publication in this volume have been carefully revised and compiled by the Editorial Board of the << ACTA OPTICA SINICA>>. The Proceedings were published in Singapore and distributed by World Scientific Publishing Co. We would like to thank the staff involved in editing and publishing these proceedings and also the many persons both in the Program Committee and elsewhere for reviewing the papers. Our thanks are due to all the authors whose contributions produced the contents of both the meeting and this volume.

Z. J. Wang
Z. M. Zhang

Shangnai, China
Sept. 1988

Topical Meeting on
Laser Materials & Laser Spectroscopy
(LM&LS '88)

A Satellite Meeting of IQEC '88

Tian Ma Hotel, Shanghai, China
July 25 - 27, 1988

Sponsored by

Chinese Optical Society

Organized by

Fudan University,
Shanghai Institute of Laser Technology,
Shanghai Institute of Optics and Fine Mechanics,
Academia Sinica,
Shanghai Laser Society.

Cooperatively Supported by

Chinese Physical Society,
Joint Council on Quantum Electronics,
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SPEECH AT THE RECEPTION PARTY OF THE TOPICAL MEETING ON LASER MATERIALS & LASER SPECTROSCOPY

Wang Daheng

Distinguished Guests
Dear Colleagues
Ladies & Gentlemen

First of all it is a great pleasure for me at this reception party to speak in the name of the China Association for Science and Technology to congratulate the opening of this Topical Meeting on Laser Materials and Laser Spectroscopy, and also in the name of the Chinese Optical Society, the host organization, to express our hearty and warm welcome to all attending this meeting. This is a satellite meeting of IQEC '88; the latter had just ended a week ago in Tokyo.

Besides having the Chinese Optical Society as sponsor this meeting is cooperatively supported by the Joint Council on Quantum Electronics, Laser and Electro-optics Society of IEEE, the Optical Society of America and the Society of Photo-optical Instrumentation Engineers as well as by the Chinese Physical Society.

Up to now, there are 77 overseas participants and 135 domestic participants. Our foreign participants come from 12 different countries, namely, Australia, Austria, Federal Republic of Germany, France, Hungary, Israel, Italy, Japan, Romania, and U. S. S. R.

I am glad to have the honour to introduce to you our distinguished guests, Prof. Xie Xide, Chairman of the Shanghai Branch of the China Association for Science and Technology, President of Fudan University and Wang Naili, Vice-chairman of the Shanghai Branch of CAST. I believe it is also appropriate on this accasion to pay tribute to Prof. Y. R. Shen who took the initiative for convening the present meeting, and to Prof. P. F. Liao who took up the real responsibility as Cochairman of the Program Committee, not only in organizing the evaluation of submitted papers, but also for inviting and organizing the invited papers to be presented by eminent scientists who are on the frontiers of the present field.

We have also the honour to receive the Delegation of the Optical Society of America headed by Prof. William B. Bridges, President of the present session. We are looking forward to cooperation between the Optical Society of America and the Chinese Optical Society.

On convening this meeting, 325 papers have been submitted, among them 242 papers from China and 83 from abroad. As a result of double peer review by 45 eminent scientists through the Program Committee 179 papers were accepted. Consequently, we expect that the academic level in this meeting ought to meet the qualification of IQEC tradition.

Speaking candidly, we regard this meeting taking place in China a great event for our Chinese colleagues. I should like to express our gratitude to it for providing us the opportunity for forthcoming academic exchanges and further acquaintances with our foreign scientists and experts. This would certainly be beneficial for promoting our developments in these fields.

Before concluding my speech I should mention we are much obliged for the financial support given by:

1. International Center for Theoretical Physics of UNESCO.
2. National Science Foundation of P. R. C.
3. North China Research Institute of Electro-optics.
4. Shanghai Jiatong University.

We are also indebted to the local organizers, the Shanghai Institute of Optics and Fine Mechanics, Academia Sinica, Fudan University, Shanghai Institute for Laser Technology and Shanghai Laser Society. Without their diligent and complicated efforts, the convening of this meeting would be impossible.

Finally, I wish to thank all who have contributed towards the success of this meeting.

Thank you for your attention.

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Laser Spectroscopy